

*Dichanthelium*

## Key to the species

- 1a.** Basal and lower stem leaf blades similar in shape, elongate and narrow, (6.3–)9.6–30 times as long as wide, erect to ascending, crowded; reproductive stems with 2–4 leaves
- 2a.** Upper glume and lower lemma pointed at the apex and surpassing the upper (i.e., fertile) lemma by (0.2–)0.5–1 mm; spikelets 3.2–4.3 mm long; terminal panicle with 7–20(–25) spikelets ..... *D. depauperatum*
- 2b.** Upper glume and lower lemma rounded to subacute at the apex, not surpassing upper lemma or surpassing it by no more than 0.3 mm; spikelets 2–3.2 mm long; terminal panicle with (12–)20–70 spikelets ..... *D. linearifolium*
- 1b.** Basal and lower stem leaf blades dissimilar, the crowded basal leaves ovate to lanceolate and spreading, 2.3–7.3 times as long as wide, the stem leaf blades longer and only rarely crowded; reproductive stems with 3–14 leaves
- 3a.** Leaf blades with a white or green-white cartilaginous margin, cordate at base; spikelets 1.4–1.8 mm long, obovoid-spherical, nearly as wide as long ..... *D. sphaerocarpon*
- 3b.** Leaf blades without or with a poorly developed cartilaginous margin, cordate to narrowed at base; spikelets 0.8–5.2 mm long, ellipsoid to obovoid, distinctly longer than wide
- 4a.** Ligules made up of a membranous base that is ciliate apically; plants from rhizomes (usually from caudices in *D. commutatum*); leaf blades 5–30 mm wide, truncate to cordate at base (often narrowed at base in *D. xanthophysum*)
- 5a.** Leaf blades strictly ascending to erect; panicle usually cylindrical, 1–4(–5) cm wide, more than 2 times as tall as wide, with strictly ascending to erect branches; spikelets rounded at apex ..... *D. xanthophysum*
- 5a.** Leaf blades spreading to ascending; panicle usually broader, (3–)4–13 cm wide, mostly 1–2 times as long as wide, with spreading to ascending branches; spikelets pointed to bluntly pointed at apex
- 6a.** Leaf sheaths pubescent with pustulose-based hairs; rhizomes 3–5 mm thick; reproductive stems with (5–)7–14 leaves
- 7a.** Upper glume and lower lemma bluntly pointed, not or hardly surpassing the upper lemma; leaf blades 15–30 mm wide, flat to the tip; spikelets sparsely pubescent ..... *D. clandestinum*
- 7b.** Upper glume and lower lemma pointed, surpassing the upper lemma; leaf blades 7–15 mm wide, tapering to an involute tip; spikelets glabrous or sparsely pubescent ..... *D. scabriusculum*
- 6b.** Leaf sheaths glabrous or pubescent with non-pustulose-based hairs; rhizomes up to 2 mm thick or absent
- 8a.** Stems densely crisp-puberulent; ligules up to 0.3 mm long; spikelets 2.2–3.2 mm long; stem leaf blades 5–10 mm wide; plants from caudices ..... *D. commutatum*
- 8b.** Stems glabrous or shortly pilose; ligules 0.4–0.9 mm long; spikelets 2.9–5.2 mm long; stem leaf blades 15–40 mm wide; plants from knotty rhizomes

- 9a.** Nodes glabrous or somewhat pubescent; spikelets 2.9–3.9 mm long  
..... *D. latifolium*
- 9b.** Nodes densely retrorse-pubescent; spikelets 3.8–5.2 mm long  
..... *D. boscii*
- 4b.** Ligules made up entirely of hairs; plants from caudices; leaf blades 2–12(–15) mm wide; narrowed to rounded at the base (truncate to cordate in *D. boreale* and some *D. dichotomum*)
- 10a.** Spikelets 2.7–4.2 mm long; upper glumes often with an orange or purple spot or blotch near the base, strongly veined ..... *D. oligoanthes*
- 10b.** Spikelets 0.8–2.6 mm long; upper glumes usually without an orange or purple area at base, weakly to strongly veined
- 11a.** Ligule a conspicuous band of hairs 1–5 mm tall that protrudes above the summit of the sheath
- 12a.** Spikelets 0.8–1(–1.1) mm long; stems 0.3–0.8 mm thick  
..... *D. wrightianum*
- 12b.** Spikelets 1.3–2.6 mm long; stems thicker than (0.8–)1 mm
- 13a.** Spikelets 1.3–2.1 mm long; sheaths glabrous or with hairs usually less than 2 mm long [confirm] ..... *D. acuminatum*
- 13b.** Spikelets 2.1–2.6 mm long; sheaths pubescent with hairs 2–4 mm long ..... *D. ovale*
- 11b.** Ligule nearly absent or up to 1 mm long, the hairs hardly protruding above the summit of the sheath
- 14a.** Spikelets pubescent; nodes of stem glabrous; leaf blades truncate to cordate at base; uppermost stem leaf erect or ascending; spikelets (1.9–)2–2.2(–2.3) mm long ..... *D. boreale*
- 14b.** Spikelets glabrous or pubescent; nodes of stem glabrous or slightly to evidently retrorse-pubescent; leaf blades narrowed to the base in common forms (varying to truncate to cordate); uppermost stem leaf usually spreading; spikelets 1.5–2.5 mm long ..... *D. dichotomum*

### 1. *Dichanthelium acuminatum* (Sm.) Gould & C.A. Clark

hairy panicgrass. **1a.** *Dichanthelium columbianum* (Scribn.) Freckmann; *Panicum acuminatum* Sw. var. *columbianum* (Scribn.) Lelong; *P. colubianum* Scribn.; *P. sabulorum* (Lam.) Gould & C.A. Clark var. *thinium* (A.S. Hitchc. & Chase) C.F. Reed; **1b.** *Dichanthelium lanuginosum* (Ell.) Gould var. *lindheimeri* (Nash) Fern.; *D. lindheimeri* (Nash) Gould; *Panicum lanuginosum* Ell. var. *lindheimeri* (Nash) Fern.; *P. lanuginosum* Ell. var. *septentrionale* (Fern.) Fern.; **1c.** *Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark var. *densiflorum* (Rand & Redf.) Gould & C.A. Clark; *Panicum nitidum* Lam. var. *densiflorum* Rand & Redf.; *P. spretum* J.A. Schultes; **1d.** *Dichanthelium lanuginosum* (Ell.) Gould var. *fasciculatum* (Torr.) Spellenberg; *Panicum lanuginosum* Ell. var. *fasciculatum* (Torr.) Fern.; *P. lanuginosum* Ell. var. *tennesseense* (Ashe) Gleason; **1e.** *Panicum lanuginosum* Ell. var. *implicatum* (Scribn.) Fern.; *P. acuminatum* Sw. var. *implicatum* (Scribn.) C.F. Reed; *P. meridionale* Ashe •

**1a.** Stems and leaf sheaths densely puberulent (the sheaths sometimes less so) with non-pustulose-based hairs, with scattered longer hairs also usually present (i.e., the pubescence of two types)

..... **1a. *D. acuminatum* ssp. *columbianum* (Scribn.) Freckmann & Lelong**

**1b.** Stems and leaf sheaths glabrous to pubescent, when pubescent, the hairs of one type and usually pustulose-based

**2a.** Leaf sheaths glabrous or pubescent with non-pustulose-based hairs (though the margins of the sheaths often ciliate near the apex)

**3a.** Terminal panicles 2.5–7 cm tall, less than 2 times as tall as wide, open; leaf blades and sheaths yellow-green, the sheaths with few or no pustulose-based cilia near the base; spikelets usually obovoid

..... **1b. *D. acuminatum* ssp. *lindheimeri* (Nash) Freckmann & Lelong**

**3b.** Terminal panicles 4–12 cm tall, 2–4 times as tall as wide, somewhat congested; leaf blades and sheaths green or purple-tinged, the sheaths often with conspicuous, pustulose-based cilia near the base; spikelets usually ellipsoid

..... **1c. *D. acuminatum* ssp. *spretum* (J.A. Schultes) Freckmann & Lelong**

**2b.** Leaf sheaths pubescent with pustulose-based hairs

**4a.** Leaf blades usually 6–12 mm wide, spreading or ascending, glabrous or pilose on the adaxial surface with hairs shorter than 3 mm; spikelets 1.5–2 mm long

..... **1d. *D. acuminatum* ssp. *fasciculatum* (Torr.) Freckmann & Lelong**

**4b.** Leaf blades usually 2–6 mm wide, erect to ascending, pilose on the adaxial surface with hairs 3–6 mm long; spikelets 1.1–1.5 mm long

..... **1e. *D. acuminatum* ssp. *implicatum* (Scribn.) Freckmann & Lelong**

**1 × 10. *Dichanthelium* ×*scoparioides* (Ashe) Mohlenbrock**

**2. *Dichanthelium boreale* (Nash) Freckmann**

northern panicgrass. *Panicum bicknellii* Nash; *P. boreale* Nash ●

**3. *Dichanthelium boscii* (Poir.) Gould & C.A. Clark**

Bosc's panicgrass. *Panicum boscii* Poir.; *P. boscii* Poir. var. *molle* (Vasey) A.S. Hitchc. & Chase ●

**4. *Dichanthelium clandestinum* (L.) Gould**

deer-tongue panicgrass. *Panicum clandestinum* L. ●

**5. *Dichanthelium commutatum* (J.A. Schultes) Gould ssp. *ashei* (G. Pearson ex Ashe) Freckmann & Lelong**

Ashe's variable panicgrass. *Panicum ashei* Pearson ex Ashe; *P. commutatum* (J.A. Schultes) Gould var. *ashei* (Pearson ex Ashe) Fern. ●

**6. *Dichanthelium depauperatum* (Muhl.) Gould**

starved panicgrass. *Panicum depauperatum* Muhl.; *P. depauperatum* Muhl. var. *psilophyllum* Fern. ●

**7. *Dichanthelium dichotomum* (L.) Gould**

forked panicgrass. **7a.** *Panicum barbuiatum* Michx.; *P. dichotomum* L.; **7b.** *Panicum clutei* Nash; *P. dichotomum* L. var. *mattamuskeetense* (Ashe) Lelong; *P. mattamuskeetense* Ashe; **7c.** *Dichantheium microcarpon* (Muhl. ex Ell.) Mohlenbrock; *Panicum microcarpon* Muhl. ex Ell.; *P. nitidum* Lam. var. *ramulosum* Torr. ●

**1a.** Lower nodes glabrous or infrequently sparsely pubescent; leaf blades usually 5–7 mm wide, slightly narrowed or constricted near the base

..... **7a. *D. dichotomum* ssp. *dichotomum***

**1b.** Lower nodes pubescent with retrorsely oriented hairs; leaf blades (5–)7–14 mm wide, not or only scarcely narrowed or constricted near the base

**2a.** Spikelets 1.8–2.5 mm long, pubescent; leaf sheaths and blades moderately to densely velutinous

..... **7b. *D. dichotomum* ssp. *mattamuskeetense* (Ashe) Freckmann & Lelong**

**2b.** Spikelets 1.5–1.8 mm long, usually glabrous; leaf sheaths and blade surfaces usually glabrous

..... **7c. *D. dichotomum* ssp. *microcarpon* (Muhl. ex Ell.) Freckmann & Lelong**

### **8. *Dichantheium latifolium* (L.) Harvill**

broad-leaved panicgrass. *Panicum latifolium* L. ●

### **9. *Dichantheium linearifolium* (Scribn.) Gould**

linear-leaved panicgrass. *Dichantheium depauperatum* (Muhl.) Gould var. *perlongum* (Nash) Boivin; *Panicum linearifolium* Scribn.; *P. perlongum* Nash; *P. wernerii* Scribn. ●

### **10. *Dichantheium oligosanthos* (J.A. Schultes) Gould**

few-flowered panicgrass. 10a.

**1a.** Spikelets 3.4–4.2 × 1.7–2 mm, usually sparsely pubescent, ellipsoid to oblong-obovoid; leaf blades usually 4–9 wide, more than 10 times as long as wide, often partly involute; ligules 2–3 mm long ..... **10a. *D. oligosanthos* ssp. *oligosanthos***

**1b.** Spikelets 2.7–3.5 × 2–2.4 mm, usually glabrous, broad-obovoid; leaf blades usually 6–15 mm wide, less than 10 times as long as wide, flat; ligules 1–1.5 mm long

..... **10b. *D. oligosanthos* ssp. *scribnerianum* (Nash) Freckmann & Lelong**

### **11. *Dichantheium ovale* (Ell.) Gould & C.A. Clark**

stiff-leaved panicgrass. **11a.** *Dichantheium commonsianum* (Ashe) Freckmann; *Panicum addisonii* Nash; *P. commonsianum* Ashe; *P. ovale* Ell. var. *addisonii* (Nash) C.F. Reed; *P. ovale* Ell. var. *pseudopubescens* (Nash) Lelong; **11b.** *Panicum acuminatum* Sw. var. *villosissimum* (Nash) C.F. Reed; *P. lanuginosum* (Ell.) Gould var. *villosissimum* (Nash) Gould; *P. villosissimum* Nash ●

**1a.** Lower stem internodes and leaf sheaths pubescent with ascending to erect, non-pustulose-based hairs; leaf blades 2–6 mm wide

..... **11a. *D. ovale* ssp. *pseudopubescens* (Nash) Freckmann & Lelong**

**1b.** Lower stem internodes and leaf sheaths pubescent with spreading or retrorse, pustulose-based hairs; leaf blades 6–10 mm wide

..... 11b. *D. ovale* ssp. *villosissimum* (Nahs) Freckmann & Lelong

**12. *Dichantherium scabriusculum* (Ell.) Gould & C.A. Clark**

tall swamp panicgrass. *Panicum aculeatum* A.S. Hitchc. & Chase; *Panicum scabriusculum* Ell. ●

**13. *Dichantherium sphaerocarpon* (Ell.) Gould**

round-fruited panicgrass. *Panicum sphaerocarpon* Ell. ●

**14. *Dichantherium wrightianum* (Scribn.) Freckmann**

Wright's panicgrass. *Panicum acuminatum* Sw. var. *wrightianum* (Scribn.) C.F. Reed; *P. minutulum* Desv.; *P. wrightianum* Scribn. ●

**15. *Dichantherium xanthophysum* (Gray) Gould**

pale-leaved panicgrass. *Panicum xanthophysum* Gray ●